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24 Number of Pages (including this page)

Date:	August 30, 2005
To Examiner:	Cao, Huedung X
Location:	United States Patent and Trademark Office
Fax No.:	**Centralized Fax Number: 1 (571) 273-8300**
From:	Larry G. Brown - Registration No. 45,834
Attorney's Docket No.	CE11376JAN Confirmation No. 6731

MESSAGE:

In connection with the above-identified Patent Application, please find attached herewith the following documents:

- 1 page Transmittal Form;
- 2 page Transmittal Letter for Appeal Brief, in duplicate;
- 20 page Appeal Brief.

PLEASE DELIVER THESE PAPERS TO:

EXAMINER:	**Cao, Huedung X**
GROUP ART UNIT:	2821
SERIAL NO.:	10/649,985
FILED:	August 26, 2003
INVENTOR:	ADAM M. DEMICCO, ET AL.

CERTIFICATE OF FAX TRANSMITTAL

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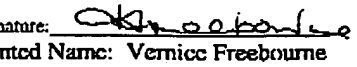
Date: August 30, 2005

Signature: 
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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S)	Adam M. Demicco, et al.	CONFIRMATION NO.:	6731
APPLN. NO.:	10/649,985	EXAMINER:	Cao, Huedung X
FILED:	August 26, 2003	GROUP ART UNIT:	2821
DOCKET NO.	CE11376JAN		
TITLE:	DETACHABLE ANTENNA MODULE		

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Date:	August 30, 2005
Signature:	Vernice Freebourne
Typed or Printed Name:	Vernice Freebourne

TRANSMITTAL LETTER FOR BRIEF ON APPEAL

Mail Stop: **APPEAL BRIEF-PATENTS**
P.O. Box 1450
Alexandria, VA 22313-1450

SIR:

Enclosed please find one copy of an Appeal Brief filed on behalf of the applicants in the matter of the above entitled application. This Brief is filed pursuant to 37 CFR § 1.192 and following the Final Rejection dated June 28, 2005 and the Notice of Appeal filed by Applicants on August 19, 2005.

The Commissioner is authorized to charge the $500.00 requisite fee for filing the enclosed Brief to Motorola, Inc., Deposit Account No. 502117. Any overpayment should be credit to the same Deposit Account. A duplicate copy of this Transmittal is attached herewith.

Respectfully submitted,

SEND CORRESPONDENCE TO:

Motorola, Inc.

Customer Number: 24273

By: Larry G. Brown
Attorney of Record
Reg. No. 45,834
Telephone: (954) 723-4295
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UNITED STATES PATENT AND TRADEMARK OFFICE

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in this Submission: 23

Application Number	10/649,985
Filing Date	August 26, 2003
First Named Inventor	Adam M. Demicco
Group Art Unit	2821
Examiner Name	Cao, Huedung X
Attorney Docket Number	CE11376JAN

ENCLOSURES (check all that apply)

- [X] Fee Transmittal Letter
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
- [ ] Affidavits/Declaration(s)
- [ ] Extension of time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Documents
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts Under 37 CFR 1.52 or 1.53
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- [ ] Drawing(s)
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- [ ] Petition
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- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [X] Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter with appropriate copies
- [ ] Other Enclosure(s) (please identify below)
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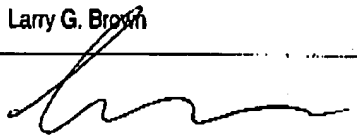
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Larry G. Brown	Registration No.	45,834
Signature			
Date	August 30, 2005		

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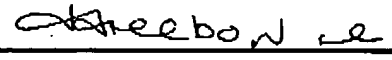
Signature		Date	August 30, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT:	Demico, Adam M., et al.	ART UNIT:	2821
APPLN. NO.:	10/649,985	EXAMINER:	Cao, Huedung X
FILED:	August 26, 2003		
TITLE:	DETACHABLE ANTENNA MODULE		

CERTIFICATE OF FAX TRANSMITTAL	
I hereby certify that this correspondence is being facsimile to the United States Patent and Trademark Office, at (571) 273-8300 Centralized Facsimile, addressed to: Mail Stop: **APPEAL BRIEF-PATENTS**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date listed below:	
Date:	August 30, 2005
Signature: Typed or Printed Name:	Vernice Freebourne

APPEAL BRIEF

Mail Stop: **APPEAL BRIEF-PATENTS**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

Dear Chief Administrative Patent Judge:

This Appeal Brief is in furtherance of the Notice of Appeal, transmitted via facsimile on August 19, 2005.

The fees required under 37 C.F.R. § 1.17(c) for filing this Appeal Brief have been authorized in the accompanying Transmittal Form.

This brief is being transmitted by facsimile pursuant to 37 C.F.R. § 1.6(d).

This brief contains items under the headings listed in the following Table of Contents, as set forth in 37 C.F.R. § 1.192(c).

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party of interest is Motorola, Inc., a Delaware corporation.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

This is an appeal from the final rejection of claims 1-19 of the above-referenced application.

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

There are a total of 19 claims in the application.

B. STATUS OF ALL THE CLAIMS

1. Claims allowed: none
2. Claims objected to: none
3. Claims rejected: 1-19

C. CLAIMS ON APPEAL

The claims on appeal are: 1-19

IV. STATUS OF AMENDMENTS

A Final Rejection was mailed on June 28, 2005 in response to an Amendment filed on April 11, 2005. The Amendment and arguments were considered by the Examiner but were deemed not persuasive. Applicants faxed a

Notice of Appeal on August 19, 2005. This Appeal Brief is submitted in support of the Notice of Appeal.

V. SUMMARY OF THE CLAIMED INVENTION

Although specification citations are inserted below in accordance with C.F.R. 1.192(c), these reference numerals and citations are merely examples of where support may be found in the specification for the terms used in this section of the brief. There is no intention to in any way suggest that the terms of the claims are limited to the examples in the specification. Although, as demonstrated by the reference numerals and citations below, the claims are fully supported by the specification as required by law, it is improper under the law to read limitations from the specification into the claims. Pointing out specification support for the claim terminology, as is done here to comply with rule 1.192(c), does not in any way limit the scope of the claims to those examples from which they find support. Nor does this exercise provide a mechanism for circumventing the law precluding reading limitations into the claims from the specification. In short, the reference numerals and specification citations are not to be construed as claim limitations or in any way used to limit the scope of the claims.

The claimed subject matter pertains to a detachable antenna module (100) that is attachable to a wireless communication device (102), which includes a built-in antenna (300) (see FIGs. 1 and 3). The detachable antenna module (100)

includes an attachment feature (200) (see FIG. 2) for removably attaching the antenna module (100) to the wireless communication device (102) such that the antenna module (100) and the wireless communication device (102) form a single mobile unit when attached (see FIG. 1). The antenna module (100) may also include an external antenna (104), which can be built into the antenna module (100) (see FIGs. 1-3).

Additionally, the antenna module (100) can include an activation control mechanism (106) for selectively electrically coupling the external antenna (104) to the wireless communication device (102) when the antenna module (100) is attached to the wireless communication device (102) (see page 3, lines 14-16). This feature permits a signal transmission or a signal reception through the built-in antenna (300) of the wireless communication device (102) or the external antenna (104) of the antenna module (100) when the antenna module (100) is attached to the wireless communication device (102) (see page 3, lines 16-19). As such, the wireless communication device (102) is freely portable and can be conveniently carried by a user, with or without the detachable antenna module (100) being attached to the wireless communication device (102).

VI. ISSUES ON APPEAL

Whether claims 1-2, 11-12 and 18 are patentable under 35 U.S.C. 102(b) over U.S. Patent No. 5,898,908 to Griffin, et al. (Griffin).

Whether claims 3 and 13 are patentable under 35 U.S.C. 103(a) over Griffin in view of U.S. Published Patent Application No. 2003/0100262.

Whether claims 4 and 14 are patentable under 35 U.S.C. 103(a) over Griffin in view of U.S. Published Patent Application No. 2004/0257284.

Whether claims 5 and 15 are patentable under 35 U.S.C. 103(a) over Griffin in view of U.S. Patent No. 6,118,408 to Yang, et al.

Whether claims 6 and 16 are patentable under 35 U.S.C. 103(a) over Griffin in view of Yang and further in view of U.S. Patent No. 6,025,816 to Dent, et al. (Dent).

Whether claims 7 and 8 are patentable under 35 U.S.C. 103(a) over Griffin in view of Dent.

Whether claim 9 is patentable under 35 U.S.C. 103(a) over Griffin in view of U.S. Patent No. 6,075,500 to Kurz, et al. (Kurz).

Whether claims 10 and 17 are patentable under 35 U.S.C. 103(a) over Griffin in view of U.S. Patent No. 6,430,400 to MacDonald, Jr., et al. (MacDonal).

Whether claim 19 is patentable under 35 U.S.C. 103(a) over Griffin in view of U.S. Patent No. 6,791,497 to Vinebrand, et al. (Vinebrand).

VII. GROUPING OF CLAIMS

For purposes of this Appeal, the Applicants present the following grouping of claims:

1. Claims 1-10 are a group, with the appeal as to the ground of rejection being based on claim 1.

2. Claims 11-19 are part of another group, with the appeal as to the ground of rejection being based on claim 11.

VIII. ARGUMENT

The recitations of Griffin do not render the claimed invention of claims 1-19 unpatentable.

A summary of Griffin may be helpful here. Griffin discloses an RF gain enhancement system 10 for a portable RF telephone 12. The system 10 includes a vehicle cradle 14 that is physically configured to receive and securely engage the RF telephone 12 for both storage and use while in an automobile or other vehicle or similar metallic housing. The RF telephone 12 includes an internal antenna 40, through which RF signals may be transmitted or received. The system 10 also includes an external antenna 66, and when the vehicle cradle 14 receives the RF telephone 12, the system 10 directs transmitted and received signals from the RF telephone 12 through the external antenna 66, instead of the internal antenna 40 (see col. 6, lines 41-51).

Significantly, the external antenna 66 is mounted on the exterior of an automobile because "[p]lacing the antenna [66] outside of the automobile overcomes the shielding effects of the metallic enclosure of the automobile" (see col. 2, lines 63-67). This feature "is critical since the performance of the internal antenna 40 is substantially limited when used within an automobile," as "the metallic enclosure of the automobile acts as a radio frequency shield" (see col. 6, lines 53-57). Because the external antenna 66 is mounted on the exterior of the vehicle in which the vehicle cradle 14 sits, the vehicle cradle 14 is connected to the external antenna 66 through a system of cables and connectors (see Col. 5, line 65 to col. 3, line 3). To overcome any losses associated with the system of cables and connectors, the transmission power of the RF telephone 12 is increased when signals are routed through the external antenna 66 (see col. 6, lines 61-66).

It is well settled that in order for a claim to be anticipated under 35 U.S.C. § 102, each and every element of the claimed invention must be disclosed in a single prior art reference. Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1574 (Fed. Cir. 1986). Whether the reference discloses every element of the invention, and also whether the reference and the claimed invention are the same, is to be determined by considering how persons of ordinary skill in the art interpret the reference. Scripps Clink & Research Fdm. v. Genentech. Inc., 927 F.2d 1565, 1576 (Fed. Cir. 1991).

Independent claims 1 and 11 of the present invention recite the limitation that the detachable antenna module includes an external antenna built into the detachable antenna module. On page 13 of the Final Office Action dated June 28, 2005, the Examiner argues that FIG. 1 of Griffin "clearly shows that the external antenna is built inside of the vehicle cradle."

Applicants respectfully disagree with the Examiner's position. In describing the external antenna 66 of Griffin, each and every reference to this component leads one of ordinary skill in the art to interpret Griffin as being limited to having the external antenna 66 mounted on the exterior of an automobile or other vehicle. For example, in the Summary of the Invention section, Griffin expressly notes that the external antenna 66 is mounted on the exterior of an automobile or other vehicle (see col. 2, lines 63-65). Griffin explains that this feature is necessary to overcome the shielding effects of the metallic enclosure of the automobile, which severely degrades the performance on the internal antenna 40 of the RF telephone when it is inside the automobile (see col. 2, lines 65-67 and col. 6, lines 53-60).

Moreover, Griffin clearly notes that a system of cables and connectors is needed to couple the vehicle cradle 14 to the external antenna 66 (see col. 5, line 66 to col. 6, line 3). In fact, when signals from the RF telephone 12 are routed through the external antenna 66, the transmission power of the RF telephone 12

must be increased to overcome losses associated with the system of cables and connectors (see col. 6, lines 61-66).

Applicants concede that Figure 1 does show a schematic of the vehicle cradle 14 represented by a dashed outline with an antenna symbol representing the external antenna 66 as being within the boundary of the dashed outline. Applicants contend, however, that this schematic merely represents that the external antenna 66 is considered a component of the vehicle cradle 14 and that the external antenna 66 is coupled to an antenna switch 42 of the RF telephone 12. Simply positioning a representation of the external antenna 66 within a dashed outline representing the vehicle cradle 14 does not necessarily cause one of ordinary skill in the art to interpret Griffin as having the external antenna 66 as being built into the vehicle cradle 14. To do so would contradict every single reference to the external antenna 66 that is in the specification of Griffin. In fact, to interpret Griffin as having the external antenna 66 built into the vehicle cradle 14 as the Examiner contends would defeat the very purpose of Griffin, which is to overcome the RF shielding effect of the automobile in which the vehicle cradle 14 sits.

Based on the discussion above, Applicants submit that Griffin does not disclose each and every element of independent claims 1 and 11, namely, the limitation that the external antenna is built into the detachable antenna module. As

such, Applicants contend that independent claims 1 and 11 are patentable over Griffin.

In addition, Applicants submit that the claims that depend from these independent claims are patentable over the prior art, both in view of their dependencies on the independent claims and their own independent patentability. Applicants in particular disagree with the Examiner's rejection of dependent claims 6-8 and 16, which recite the external antenna being printed on a flex substrate or a thin printed circuit board. This element is useful because it allows the dimensions of the external antenna to be kept relatively small. Dent describes a printed antenna 32 that is constructed of a flexible film sheet 100 made of a dielectric material, which enables the printed antenna 32 to fit within a radome member 30 shaped as a cylindrical tube (see col. 6, lines 23-31). That is, such a configuration is intended to permit the antenna 32 to fit within the physical dimensions of the radome 30.

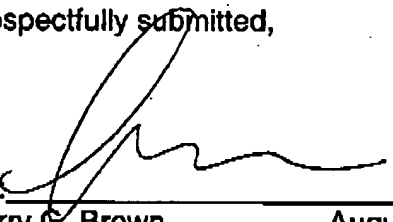
Because the external antenna of Griffin is mounted outside the vehicle and Griffin mentions nothing about limited physical space for the external antenna, one of skill in the art would find no motivation to use the printed antenna configuration of Dent with the external antenna of Griffin. Spatial restraints for the antenna are simply not an issue in Griffin.

Conclusion

For the claims to be unpatentable under § 102(b), the prior art must disclose each and every limitation contained in the claims, and particularly, in this case, must show, as interpreted by one of ordinary skill in the art, that the external antenna is built into the detachable antenna module. Because Griffin fails to teach or suggest this structure or methods employing such structures – in fact, it teaches away from such a feature - Applicants submit that the claims on appeal, namely claims 1-19, are patentable.

For the reasons set forth above, and as is apparent from a review of the above-cited references, the claims on appeal present patentable subject matter such that reversal of the rejection is appropriate.

Respectfully submitted,



By: _____
Larry G. Brown August 30, 2005

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IX. CLAIMS APPENDIX

1. (previously presented) A detachable antenna module for attachment to a wireless communication device that has a built-in antenna, the detachable antenna module comprising:

at least one attachment feature on the antenna module for removably attaching the antenna module to the communication device such that the antenna module and the communication device form a single mobile unit when attached;

an external antenna, wherein the external antenna is built into the detachable antenna module; and

an activation control mechanism for selectively electrically coupling the external antenna to the communication device when the antenna module is attached to the communication device, so as to selectively route at least one of signal transmission and signal reception through one of the built-in antenna of the communication device and the external antenna of the antenna module when the antenna module is attached to the communication device.

2. (original) The detachable antenna module according to claim 1, further comprising:

a connector coupled to the external antenna,

wherein the connector selectively electrically couples the external antenna to a corresponding connector of the communication device based on the state of the activation control mechanism.

3. (original) The detachable antenna module according to claim 2,

wherein the activation control mechanism is an activation button, and

pressing the activation button alternately makes and breaks electrical contact between the connector of the antenna module and the corresponding connector of the communication device so as to alternately electrically couple and electrically uncouple the external antenna and the communication device.

4. (original) The detachable antenna module according to claim 2, wherein the connector of the antenna module is a 50 ohm RF connector.

5. (original) The detachable antenna module according to claim 2, further comprising a matching network coupled to the external antenna, the matching

network matching the impedance of the external antenna to the impedance of the corresponding connector of the communication device.

6. (original) The detachable antenna module according to claim 5, wherein the external antenna and the matching network are printed on one of a flex substrate and a thin printed circuit board.

7. (original) The detachable antenna module according to claim 1, wherein the external antenna is printed on a flex substrate.

8. (original) The detachable antenna module according to claim 1, wherein the external antenna is printed on a thin printed circuit board.

9. (original) The detachable antenna module according to claim 1, wherein the external antenna is extendable/retractable.

10. (original) The detachable antenna module according to claim 1, wherein the at least one attachment feature includes a plurality of tongues that fit into corresponding grooves on the communication device to securely attach the antenna module to the communication device.

11. (previously presented)A wireless communication device comprising:

a built-in antenna; and

a detachable antenna module including an external antenna built into the detachable antenna module, an activation control mechanism, and at least one attachment feature for removably attaching the antenna module to the communication device such that the antenna module and the communication device form a single mobile unit when attached,

wherein at least one of signal transmission and signal reception is routed through the built-in antenna when the antenna module is not attached to the communication device, and

the activation control mechanism selectively electrically couples the external antenna to the communication device when the antenna module is attached to the communication device, so as to selectively route at least one of signal transmission and signal reception through one of the built-in antenna and the external antenna of the antenna module when the antenna module is attached to the communication device.

12. (original)The wireless communication device according to claim 11, further comprising:

an external connector interface; and

a connector,

wherein the antenna module further includes an external connector that interfaces with the external connector interface when the antenna module is attached to the communication device, the external connector being coupled to the external antenna, and

the external connector selectively electrically couples the external antenna to the connector based on the state of the activation control mechanism.

13. (original) The wireless communication device according to claim 12,

wherein the activation control mechanism is an activation button,

the connector is an RF switch, and

pressing the activation button alternately makes and breaks electrical contact between the external connector and the RF switch so as to alternately electrically couple and electrically uncouple the external antenna and the communication device.

14. (original) The wireless communication device according to claim 13, wherein the external connector is a 50 ohm RF connector.

15. (original) The wireless communication device according to claim 13, further comprising a matching network coupled to the external antenna, the matching network matching the impedance of the external antenna to the impedance of the RF switch.

16. (original) The wireless communication device according to claim 15, wherein the external antenna and the matching network are printed on one of a flex substrate and a thin printed circuit board.

17. (original) The wireless communication device according to claim 11, further comprising:

a plurality of grooves on the communication device,

wherein the at least one attachment feature of the antenna module includes a plurality of tongues that fit into the grooves on the communication device to securely attach the antenna module to the communication device.

18. (original) The wireless communication device according to claim 11, wherein the communication device is a wireless phone.

19. (original) The wireless communication device according to claim 11, wherein the communication device is one of a two-way radio, a text messaging device, a portable computing device having a wireless LAN card, and a global positioning system.